

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001592**Date Inspected:** 25-Feb-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1830**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sun Wei & Chen Xi**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

This Quality Assurance Inspector (QAI) observed various fabrication and welding practices at Zhenhua Port Machinery Company (ZPMC) on Changxing Island in Shanghai, China today for the Self Anchored Suspension Bridge for San Francisco, California.

Orthotropic Box Girder (OBG)

In Bay 1 this QAI observed the milling of plate edges, beveling of partial joint penetration (PJP) preparations, machining of 2 millimeter radius on edges of plates and drilling of bolt holes using hardened washer guides of un-bent closed u-rib plates. This QA Inspector also witnessed the simultaneous bending of the close u-rib panels in compliance with the special provisions. Welding was also being carried out on the panels inside of the bent closes u-ribs and tack welding closed ribs to deck plates with the gas metal arc welding (GMAW). GMAW root welds were also being made to the production mock up test (PMT) and closed u-rib to deck plate welds.

This QAI also performed final visual inspection of closed u-rib to deck plate welds on deck plate DP018-001. Welds examined were DP018-001-001, 002, 003 and 008. Data was recorded on the Visual Inspection Report for the OBG Deck Panels spreadsheet.

This QAI witnessed GMAW tack welding of closed ribs to deck plate DP20/PL13B, closed u-rib U134 by ZPMC welders Hau Long, welder identification 059446 and Shen Qi Zhen, welder identification 059401 on welds DP020-001-005 & 006. The Quality Control Inspector (QCI) Duan Ya Bing was observed checking the various essential welding variables. The variables recorded were as follows; voltage 30.7, amperage 332 and travel speed

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512 millimeters per minute in accordance with welding procedure specification WPS-B-T-2342-U2 (U-Rib)

This QAI witnessed fillet welding with the flux core arc welding (FCAW) process between the closed u-rib U19 and panel by ZPMC welder Gong Zhi Wu, welder identification 059405. Some of the essential welding variables were checked and recoded as follows: voltage 24.4, amperage 203 and travel speed 107 millimeters per minute in accordance with WPS-B-T-2234-B-U2.

Summary of Conversations:

A conversation was held with American Bridge/Fluor Quality Control Inspector Warren Buehler concerning the continuing of GMAW root welding on to a second deck plate, DP017-001 prior to completion of the submerged arc welding (SAW) on the PMT or first production deck panel. Mr. Buehler responded that he understood.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Berger, Bruce	Quality Assurance Inspector
Reviewed By:	Cochran, Jim	QA Reviewer
